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TECHNICAL MEMORANDUMS
NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS.

No. 228

GOVERNMENT RELATIONS WITH AIR TRAFFIC COMPANIES AND
OWNERS OF TOURING AIRPLANES.

From "Bulletin de la Chambre Syndicale des
Industries Aéronautiques," April, 1923.

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NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS.

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GOVERNMENT RELATIONS WITH AIR TRAFFIC COMPANIES AND
OWNERS OF TOURING AIRPLANES.

1. Government Relations with Air Traffic Companies.

Air traffic came into being immediately after the war, as the logical sequel of the great progress made in aeronautics during the four years of hostilities.

Even before 1914, Mr. Henri Deutsch de la Meurthe had already created the "Compagnie Générale Transaérienne," in order to show his faith in the future of aviation, but at that time airplanes and airships were too imperfect for regular commercial exploitation.

Shortly after the armistice, General Duval, Director of Military Aeronautics, and other persons, convinced of the possibilities of aviation, gave methodical and official aid to the development of commercial air navigation and, in agreement with the Post Office Department, inaugurated a series of postal lines, notably those of Paris-Nantes and Paris-Bordeaux. At the end of 1918, Mr. Pierre Latécoère obtained subsidies and contracts to exploit the line Toulouse-Rabat.

The "Société des Ateliers d'Aviation Louis Bréguet," in January, 1919, made an agreement with the Blériot, Caudron and Morane-Saulnier works, with a view to the exploitation of air

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lines. Thus was created the "Compagnie des Messageries Aériennes." It commenced with the Paris-Lille route and then inaugurated the Paris-Brussels and finally the Paris-London line.

This example was followed and during 1919 there were created the "Compagnie Aérienne Française," "l'Aéronavale" and the "Grands Express Aériens," then, in 1920, the "Compagnie Franco-Roumaine de Navigation Aérienne," the "Transports Aériens Guyanais" and several others.

The assistance given in 1919 to the first air traffic companies was later found quite insufficient, since the operation costs greatly exceeded the estimates. On the other hand, the regularity and safety of the service far surpassed the most optimistic expectations and were therefore very encouraging. The operation of the Paris-Lille route was remarkably successful during the spring and summer of 1919.

Toward the end of 1919, the "Service de la Navigation Aérienne" had acquired sufficient experience to enable it to draw up a schedule of premiums and subsidies to be allowed the air traffic companies. The government had an interest in seeing commercial aviation develop, not only in order to draw into the air service a large number of pilots and mechanics, but also to keep the bureau of research and the constructors busy. The government could hardly have done more and it should be congratulated for the encouragement given to those who undertook to operate air lines.

The results of the year 1920 made it possible to compile the

first important statistics and to gage the efforts made by the companies, as a basis for beginning the first classification of them.

During the year 1921, the schedule of premiums and subsidies was improved and air traffic developed in an encouraging manner. The interesting figures published by the "Service de la Navigation Aerienne" may appropriately be given here.

Recapitulation of Air Traffic in France and her Colonies.

This is for the lines Paris-London, Paris-Brussels-Amsterdam, Bayonne-Bilbao-Santander, Paris-Strasburg-Prague-Warsaw, Toulouse-Casablanca, Bordeaux-Toulouse-Montpellier, and also other lines which were operated regularly for a relatively short time, such as Paris-Geneva, Paris-Cabourg, Paris-Le Havre, etc.

Year	No. of completed trips	Distance covered		Paying passengers	Freight		Mail	
		km.	mi.		kg.	lbs.	kg.	lbs.
1919	988	265784	165150	558	6966	15357	397	875
1920	2386	853959	530624	1379	48100	106042	3925	8653
1921	6322	2353455	1462364	9427	166490	367047	9481	20902
1922	7144	3453291	2145768	14397	529664	1167708	41173	90771

The premiums allowed the companies were of three types: a purchase premium which was intended to encourage the companies to buy new and modern equipment; a kilometric subsidy, based on the efficiency of the airplane in use, which was also intended to encourage the companies to use better airplanes; a "commercial"

subsidy which, by rewarding the companies according to the commercial results achieved, encouraged them to seek in every way to satisfy their patrons, in order to attract them to aerial navigation.

The policy of the Under-Secretariat of State was excellent, but in 1921 it became apparent that the precarious character of these premiums and subsidies (awarded annually by contracts which appeared sufficient to support the first operations of these companies) could not be adapted to the ever-growing expenses of the companies as they enlarged. These companies, in fact, had to establish programs of work and operation covering a term of years. They, therefore became liable to heavy expenses which made it necessary for them to have the assurance that the contracts granted them would be continued.

It is manifest that, in order to enable the companies to have any certainty regarding the future, the obligations of the government toward them should be extended over a period of 10 years or more. At that time, the Under-Secretary of State for Aeronautics, Mr. P. E. Flandin, succeeded in having Parliament adopt a budget enabling contracts for premiums and subsidies to be awarded for a period of 10 years.

Certainty concerning the continuance of these subsidies is absolutely necessary to the companies, for the very simple reason that, though (as experts agree) air navigation enterprises in the future will be able to support themselves by their commercial receipts, such is far from being the case at present. On the one hand, the operating costs are still very high for well-known reasons

and, on the other hand, the receipts are still small, by reason of the novelty of this method of transportation and also, perhaps, because present-day airplanes, which are generally modified war types, are not sufficiently reliable.

This shows how indispensable the aid of the government will be for several years to come, a period during which constructors will produce airplanes better adapted to the needs of the air lines created and during which the companies will have to solve many problems of aerial navigation: flight by night, in fog, etc.

In order that the constructors and companies may work along these lines, it is necessary for the airplanes, although still imperfect, to be used on the lines and for the companies to learn to establish the necessary accessories and gradually perfect all the details indispensable to the development of air navigation.

Some people think we could await the advent of these anticipated improvements before operating the lines and that, as a consequence, the heavy expenses caused the government by the schedule of premiums and subsidies might be avoided. To these people a firm reply must be made that such a method would delay by many years the advent of these improvements and that such a delay would place our country in a state of dangerous inferiority with respect to those countries where the future importance of air navigation is better understood.

2. What Should be the Forms of the Contracts
between the Government and the Air Traffic Companies?

These long-term contracts may take several forms. They may be based on premiums and subsidies granted in proportion to the amount of traffic. This is, in a way, the present system stretched over 20 or 50 years. This leaves the government in some uncertainty with regard to fixing subsidies and their rates of gradual diminution, for it is difficult to foresee today the exact characteristics of airplanes built ten years hence and still more so, twenty years hence. It was by reason of these difficulties that the annual appropriation plan was still employed in 1922, since it had the advantage of permitting the arrangement to be based on accurate information. Long-term contracts may also provide for administration jointly by the government and the companies.

Lastly, they may include the form of guaranties given by the government on the interest and dividends of the stock issued by the companies, guaranties to which, during the first years, would be added gradually diminishing subsidies until their elimination at the end of a certain period of time. Consequently, the participation of the government in the profits of the companies would enable it to recover at least a portion of the expenses corresponding to the guaranties given.

Whatever the means adopted, it would be well to award special and distinct premiums to encourage the operating companies and the constructors to create better aircraft, which are necessary for

the future of aviation.

Long-term contracts are necessary, especially to enable the companies to obtain the financial aid required for the development of their enterprises. Up to the present time, such aid could not be obtained from banks, by reason of the precarious situation of the air traffic companies due to the short duration of their contracts and concessions. The lack of these contracts would entail certain stagnation on air traffic companies.

3. Material Aid.

In addition to the premiums and subsidies granted by the government, the latter establishes landing fields and the accessories necessary for the operation of aerial lines, such as beacon lights for night flying, and radio and meteorological stations. The different countries traversed by the air lines receive similar assistance. The airdromes and their installation were provisional and the work done during the last two years has barely sufficed to make their utilization possible. There is room for great improvement in the radiotelegraphic, radiotelephonic and meteorological services.

As for the pilots, they have shown themselves equal to their task, but there is no doubt that, as the lines are extended, the piloting of the aircraft will be done in a more scientific manner, similar to that of ships on the principal lines. The pilot will be principally a helmsman who obeys the instructions of the chief navigator. The latter, due to the great improvement in aerial

navigation instruments, will be able, in spite of winds and clouds, to guide his aircraft with absolute certainty between the terminal ports.

4. Aerial Work and Sporting Aviation.

In addition to air traffic, the airplanes can be used for aerial work and also for sport. Aerial work consists of pleasure trips in airplanes, aerial photography and all operations which can be performed by airplanes more easily than by any other means of locomotion. It should be encouraged by the government, for the reason that it stimulates activity in the field of aeronautical science and consequently is of great importance to the country. It has not hitherto been sufficiently encouraged.

The advantage for the government in encouraging sporting aviation rests in the fact that it invites the public to interest itself more and more in aerial navigation and that it gives employment to a great number of mechanics and pilots and thus assists in the development of aeronautics.

It may be well to recall, in concluding this note, what Mr. Louis Bréguet, President of the "Chambre Syndicale des Industries Aéronautiques," said during a lecture given at London, on April 6, 1922, before the Royal Aeronautical Society:

"Aerial traffic is expensive at the present time, because we have not yet emerged from the experimental period and because amortization, the upkeep of airplanes and general expenses of the com-

panies are very high, but we can reasonably predict that within ten years these costs will be reduced in the proportion of 7 to 1.

"Furthermore, we should not forget that time is money and that a saving of four or five days in the journey from London to Cairo, for example, is of capital importance to business men. The price of passage will be for them of secondary importance, if they can be assured not only of speed but also of safety, which must be attained. When we have arrived at that point, air navigation, at least with regard to international communications, will be without possible competition on the part of the other means of communication.

"We should, therefore, work without ceasing, with full confidence in the future of aviation."

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